



## CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

March 26, 2015

### **H.R. 874** **American Super Computing Leadership Act**

*As ordered reported by the House Committee on Science, Space, and Technology  
on March 4, 2015*

H.R. 874 would require the Secretary of Energy to advance efforts to develop exascale computing systems. Exascale computing refers to systems capable of at least a billion billion calculations per second, which is believed to equal the processing power of the human brain.

CBO estimates that implementing H.R. 874 would have no significant effect on the budget because the legislation would largely codify the Department of Energy's current plans to develop advanced computer systems under its existing authorities. Enacting H.R. 874 would not affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply.

The legislation would clarify that the department's efforts to advance high-end computing initiatives should be focused on exascale. H.R. 874 would require that the department conduct research programs, engage in partnerships, submit additional reports, and develop technologies that will advance exascale computing capabilities.

Under the department's mission to research and develop high-end computing systems, the Advanced Scientific Computing Research program, an arm of the Department of Energy's Office of Science, received an appropriation of \$105 million in 2015 for activities to develop exascale computing. According to information from the department, the requirements of the legislation would not result in a significant expansion of their current exascale research and development activities. Once the exascale system has been fully developed, the department plans to place it in an existing facility, which houses high-end computing systems. The department plans to upgrade that facility as necessary to accommodate the exascale system's requirements.

H.R. 874 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act. Public universities would benefit from research partnerships. Any cost incurred by those entities would be incurred voluntarily.

The CBO staff contact for this estimate is Marin Burnett. The estimate was approved by Theresa Gullo, Deputy Assistant Director for Budget Analysis.